To keep food cold/hot
- always choose the poorer conductor of heat

Hot food/drinks:
Material ___. (choice) _____ in the container made of Material _____ gains heat the slowest from the surroundings/any heat source (evidence) so Material ___ is the poorest conductor of heat (concept). The hot food/drinks will lose heat slowest to the surroundings and keep the hot food/drinks warmest for the longest period of time (Link)

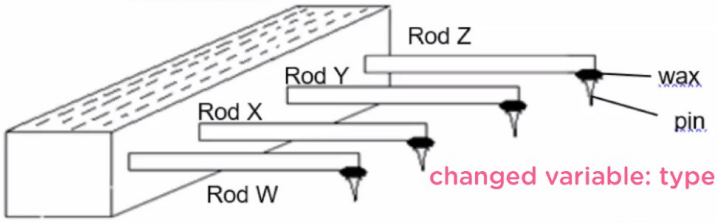
_____ in the container made of Material _____ loses heat the slowest to the surroundings (evidence) when experiment set-up is to test for losing of heat

Cold food/drinks:
Material ___. (choice) _____ in the container made of Material _____ gains heat the slowest from the surroundings/any heat source (evidence) so Material ___ is the poorest conductor of heat (concept). The cold food/drinks will gain heat slowest from the surroundings and keep the cold food/drinks coldest for the longest period of time (Link)

type of

31. Mark conducted an experiment on 4 rods made of different materials W, X, Y and Z. The 4 rods are of the same length and thickness. A pin was stuck to the end of each rod with a drop of wax before boiling water was poured in the container.

heat source



changed variable: type of material of the rod

Measured variable: time taken for the pin to fall off the rods

Mark recorded the time taken for each pin to fall off the rod below.

Material of rod	Time taken for pin to fall off the rods (sec)
W	6
X	12
Y	23
Z	17

Z 17

Which material is the best to make a cooking pot so that food can be cooked the fastest?

) Based on the results shown in the table above, which material is the best conductor of heat? Explain your answer. [2]

W (choice). Time taken for pin to fall off the rods was the shortest (evidence). W is the best conductor of heat and W gained heat from the boiling water the fastest (concept). W is the most suitable to make a cooking pot so that the food in the cooking pot can gain heat the fastest from the fire and cooked the fastest (LINK)

(b) Besides keeping the rods of the same length and thickness, name two other variables that should be kept constant. [2]

1) the amount of wax applied on each rod
2) the mass of the pin